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动物分类学报

FIVE NEW SPECIES OF *ACTINA* FROM CHINA (DIPTERA, STRATIOMYIDAE)

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Abstract Five new species of *Actina* from China are described: *A. basalis* sp. nov., *A. gongshana* sp. nov., *A. longa* sp. nov., *A. tengchongana* sp. nov., and *A. zhangae* sp. nov. The types are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing.
Key words Diptera, Stratiomyidae, *Actina*, new species, China.

Actina Meigen is distributed in the Holarctic and Oriental Regions. It is characterized by the elongated scape, scape and pedicel nearly as long as the flagellum, and palpus well developed and 2-segmented (Yang and Nagatomi, 1992). The Palaearctic and Oriental species were mainly studied by Frey (1961), Nagatomi and Tanaka (1969), Yang and Nagatomi (1992). The Chinese species were reviewed by Yang and Nagatomi (1992). Here five new species are added to the fauna of China. The types are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing.

1 *Actina basalis* sp. nov. (Figs 3 - 4)

Male. Body length 7.4 - 7.6 mm, wing length 5.5 - 5.7 mm.

Head black, but frons (except narrow anterior area) and vertex including ocellar tubercle more or less shining metallic green. Eyes distinctly separated, dark brown. Hairs on head dark brown except ventral surface with pale hairs; hairs on face, frons and vertex rather long; hairs on eyes somewhat dense. Antenna brownish yellow except flagellum black with blackish base; scape and pedicel with black hairs; antennal ratio 10:5:18. Proboscis mostly black with pale hairs; palpus blackish except apical segment dark yellow, with pale hairs.

Thorax shining metallic green. Humeri and postalar calli black. Spines on scutellum dark yellow. Hairs on thorax pale except mesonotum with several long dark brown hairs. Legs black except apices of femora (excluding extreme tip of hind femur) dark yellow; fore tibia dark brown and mid tibia brown except base dark yellow, hind tibia entirely black; tarsi dark brown except mid and hind tarsomeres 1 - 2 yellow. Hind tarsomeres 1 - 2 weakly thickened. Hairs on legs pale except tibiae and tarsi with blackish hairs. Wing hyaline except apical portion pale grayish brown, cell R_{2+3} mostly pale; stigma dark brown; veins dark brown; discal cell with posterior width distinctly larger than apical width. Halter dark brown with yellow knob.

Abdomen dark brown, tinged metallic purple. Hairs on abdomen pale, tergites 1 - 3 with long lateral hairs. Male genitalia: tergite 9 distinctly wider than long, with large basal incision; ventral fused portion of gonocoxites nearly straight apically; gonocoxal dorsal bridge wide; gonostylus with inner lobe; aedeagus with three lobes, median lobe shorter than lateral ones, lateral lobes slightly curved outward apically.

Female. Unknown.

Holotype ♂, Yunnan, Jinping (22.7° N, 103.2°E), Baohuzhan, 18 May 2006, ZHANG Jun-Hua. Paratypes 2 ♂♂, Yunnan, Jinping, Yakou, 18 May 2006, ZHANG Jun-Hua.

Etymology. The specific name refers to the dark brown base of the mid tibia.

Remarks. This new species is somewhat similar to *A. xizangensis* Yang *et* Nagatomi, but may be separated from the latter by the antenna shorter than the head, and mid tibia dark yellow basally.

2 *Actina gongshana* sp. nov. (Figs 5 - 6)

Male. Body length 6.0 - 6.3 mm, wing length 5.0 - 5.4 mm.

Head black, but frons (except narrow anterior area) and vertex including ocellar tubercle more or less shining metallic green. Eyes distinctly separated, reddish brown. Hairs on head dark brown except ventral surface with pale hairs; hairs on face, frons and vertex rather long; hairs on eyes short and very sparse. Antenna brownish yellow except flagellum

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(excluding basal portion) black; scape and pedicel with black hairs; antennal ratio 10∶5∶17. Proboscis mostly black with blackish hairs; palpus blackish with black hairs.

Thorax shining metallic green. Humeri and postalar calli dark brown. Spines on scutellum dark yellow. Hairs on thorax pale except mesonotum with some long dark brown hairs on mid-longitudinal area. Legs black except apices of femora (excluding extreme tip of hind femur) dark yellow; fore tibia brown with yellow base, mid tibia dark yellow, hind tibia entirely black; tarsi dark brown except mid and hind tarsomeres 1 – 2 yellow. Hind tarsomeres 1 – 2 weakly thickened. Hairs on legs pale except tibiae and tarsi with blackish hairs. Wing hyaline except apical portion pale grayish brown, cell R_{2+3} mostly pale; stigma dark brown; veins dark brown; discal cell with posterior width slightly larger than apical width. Halter dark brown with dark yellow knob.

Abdomen dark brown, tinged purple. Hairs on abdomen blackish except tergites 1 – 3 with long pale lateral hairs. Male genitalia: tergite 9 distinctly wider than long, with large basal incision; ventral fused portion of gonocoxites nearly V-shaped; gonocoxal dorsal bridge somewhat narrow; gonostylus without distinct inner lobe; aedeagus with three lobes, median lobe slightly shorter than lateral ones.

Female. Unknown.

Holotype ♂, Yunnan, Gongshan (27.7° N, 98.6°E), Danzhu, 18 May 2007, LIU Xing-Yue. Paratypes 2 ♂♂, same data as holotype.

Etymology. The species is named after the type locality Gongshan.

Remarks. This new species is similar to *A. bilobata* Li, Zhang *et* Yang, but may be separated from the latter by the fore tibia brown with dark yellow base, antennal flagellum black except the base brownish yellow and aedeagus trilobate.

3 *Actina longa* sp. nov. (Figs 1 – 2)

Female. Body length 5.5 mm, wing length 5.0 mm.

Head black, but frons (except narrow anterior area) and vertex including ocellar tubercle shining metallic purple. Eyes distinctly separated, reddish brown. Hairs on head pale; hairs on face slightly long while those on frons and vertex short; hairs on eyes short and spare. Antenna black; scape and pedicel with black hairs; antennal ratio 15∶6∶28. Proboscis dark brownish yellow with blackish hairs; palpus brown except apical segment dark yellow, with pale hairs.

Thorax shining metallic purple. Humeri and postalar calli dark brown. Spines on scutellum dark yellow. Hairs on thorax pale. Legs dark brown; fore and mid femora brown, hind femur dark brown with base somewhat pale; bases of tibiae brownish; mid and hind tarsomere 1 brownish. Hind tarsomeres 1 – 2 weakly thickened. Hairs on legs pale except tarsi with mostly blackish hairs. Wing hyaline except stigma dark brown; veins dark brown; discal cell rather narrow apically, acute posteriorly, with posterior veins X-shaped. Halter dark yellow with brown base.

Figs 1 – 2. *Actina longa* sp. nov., female. 1. Body, dorsal view. 2. Head, lateral view.

Abdomen dark brown, tinged metallic purple. Hairs on abdomen pale, except those on tergites 1 – 3 relatively long.

Male. Unknown.

Holotype ♀, Xizang, Nyingchi (29.5° N, 94.3°E), 3 050 m, 4 June 1978, LI Fa-Sheng.

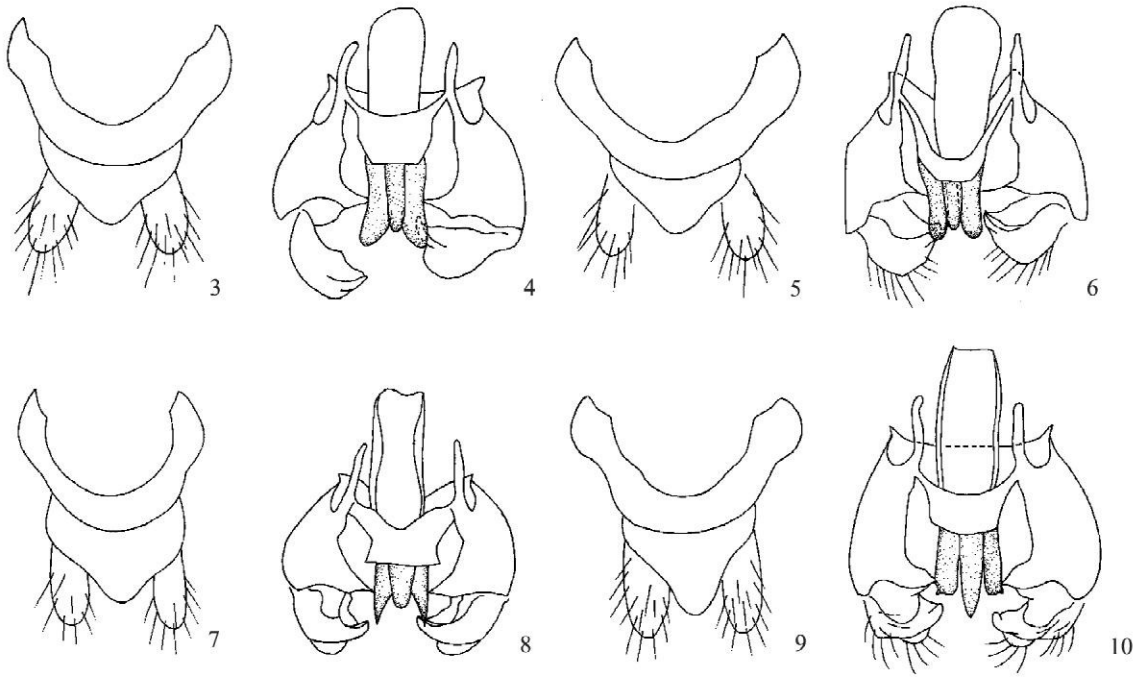
Etymology. The specific name refers to the long antenna.

Remarks. This new species is similar to *A. varipes* Lindner, but it may be separated from the latter by the dorsal surface of the head and thorax metallic purple and antenna longer than the head.

4 *Actina tengchongana* sp. nov. (Figs 7 – 8)

Male. Body length 4.7 mm, wing length 4.0 mm.

Head black, but frons (except narrow anterior area) and vertex metallic purple, ocellar tubercle metallic green. Eyes distinctly separated, reddish brown. Hairs on head dark brown except ventral surface with pale hairs; hairs on face, frons and vertex rather long; hairs on eyes short and sparse. Antenna entirely black; scape and pedicel with black hairs; antennal



Figs 3 – 4. *Actina basalis* sp. nov., male. 5 – 6. *Actina gongshana* sp. nov., male. 7 – 8. *Actina tengchongana*, male. 9 – 10. *Actina zhangae* sp. nov., male. 3, 5, 7, 9. Tergites 9 – 10 and cerci, dorsal view. 4, 6, 8, 10. Genital capsule, dorsal view.

ratio 10 : 5 : 18. Proboscis yellow with pale hairs; palpus black with blackish hairs.

Thorax shining metallic green. Humeri and postalar calli dark brown. Spines on scutellum dark yellow. Hairs on thorax pale except mesonotum. Legs (hind tibia and tarsus broken) yellow except coxae and trochanters black, hind femur dark brown with apical portion (excluding extreme tip) dark yellow; fore tibia brown with yellow base; tarsi dark brown except mid tarsomeres 1 – 2 yellow. Hairs on legs pale except tibiae and tarsi with blackish hairs. Wing hyaline except stigma dark brown; veins dark brown; discal cell with posterior width small, equal to apical width. Halter dark brown with dark yellow knob.

Abdomen dark brown, tinged purple. Hairs on abdomen pale; tergites 1 – 3 with long lateral hairs. Male genitalia: Tergite 9 slightly wider than long, with large basal incision; ventral fused portion of gonocoxites with a nearly V-shaped incision; gonocoxal dorsal bridge wide; gonostylus with distinct inner lobe; aedeagus with three lobes, obtuse median lobe shorter than acute lateral ones.

Female. Unknown.

Holotype ♂, Yunnan, Tengchong (25° N, 98.5°E), Zizhi, 31 May 2007, LIU Xing-Yue.

Etymology. The species is named after the type locality Tengchong.

Remarks. This new species is similar to *A. apiciflava* Li, Zhang *et* Yang, but may be separated from the latter by the head metallic purple dorsally, gonocoxal fused ventral portion with a V-shaped incision, and aedaegus with the median lobe obtuse and lateral ones apically weakly curved inward.

5 *Actina zhangae* sp. nov. (Figs 9 – 10)

Male. Body length 5.6 mm, wing length 4.6 mm.

Head black, but frons (except narrow anterior area) and vertex including ocellar tubercle more or less shining metallic green. Eyes distinctly separated, reddish brown. Hairs on head dark brown except ventral surface with pale hairs; hairs on face, frons and vertex rather long; eyes nearly bare. Antenna black; scape and pedicel with black hairs; antennal ratio 10: 5: 18. Proboscis yellow with blackish hairs; palpus blackish except apical segment dark yellow with black hairs.

Thorax shining metallic green. Humeri and postalar calli dark brown. Spines on scutellum dark yellow. Hairs on thorax pale. Legs yellow except hind coxa and trochanter black, extreme tip of hind femur black, hind tibia black except basal portion brown with brownish yellow extreme base; tarsi dark brown except mid and hind tarsomeres 1 – 2 yellow. Hind tarsomeres 1 – 2 weakly thickened. Hairs on legs pale except tibiae and tarsi with mostly blackish hairs. Wing hyaline except stigma dark brown; veins dark brown; discal cell with posterior portion acute, with

very short crossvein separate from M_3. Halter yellow with dark brown base.

Abdomen dark brown, tinged purple. Hairs on abdomen blackish except tergites 1 – 3 with long pale lateral hairs. Male genitalia: tergite 9 distinctly wider than long, with large basal incision; gonocoxal dorsal bridge moderately wide; gonostylus with weak inner lobe; aedeagus with three lobes, median lobe acute and slightly longer than obtuse lateral ones.

Female. Unknown.

Holotype ♂, Yunnan, Jinping (22.7° N, 103.2°E), Yakou, 18 May 2006, ZHANG Jun-Hua.

Etymology. The species is named after the collector Dr. ZHANG Jun-Hua.

Remarks. This new species is very similar to *A. elongata* Li, Zhang *et* Yang, but it may be separated from the latter by the hind femur without the brown anterior stripe, basal portion of the hind tibia brown and crossvein m-cu not directly connected with the discal cell.

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中国星水虻属五新种（双翅目，水虻科）

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摘 要 记述我国星水虻属 5 新种，即基褐星水虻 *Actina basalis* sp. nov.，贡山星水虻 *A. gongshana* sp. nov.，长角星水虻 *A. longa* sp. nov.，腾冲星水虻 *A. tengchongana* sp. nov. 和张氏星水虻 *A. zhangae* sp. nov.。新种模式标本保存在中国农业大学昆虫博物馆。

1 基褐星水虻，新种 *Actina basalis* sp. nov.（图 3 ~ 4）

新种与西藏星水虻 *A. xizangensis* Yang *et* Nagatomi 有些近似，但触角比头部短，中足胫节基部暗黄色。

正模 ♂，云南金平保护站，2006-05-18，张俊华采。副模 2 ♂♂，云南金平丫口，2006-05-18，张俊华采。

2 贡山星水虻，新种 *Actina gongshana* sp. nov.（图 5 ~ 6）

新种与双叶星水虻 *A. bilobata* Li, Zhang *et* Yang 近似，但前足胫节褐色且基部暗黄色，触角鞭节黑色且基部黄褐色，阳茎三叶。

正模 ♂，云南贡山丹侏，2007-05-18，刘星月采。副模 2 ♂♂，同正模。

3 长角星水虻，新种 *Actina longa* sp. nov.（图 1 ~ 2）

新种与变星水虻 *A. varipes* Lindner 近似，但头胸背面紫色，触角比头部长。

正模 ♂，西藏林芝，3 050 m，1978-06-04，李法圣采。

4 腾冲星水虻，新种 *Actina tengchongana* sp. nov.（图 7 ~ 8）

新种与黄端星水虻 *A. apiciflava* Li, Zhang *et* Yang 近似，但头部背面紫色，生殖基节腹面愈合部基部呈 V 型凹缺，阳茎中叶钝而侧叶端部稍内弯。

正模 ♂，云南腾冲自治，2007-05-31，刘星月采。

5 张氏星水虻，新种 *Actina zhangae* sp. nov.（图 9 ~ 10）

新种与长突星水虻 *A. elongata* Li, Zhang *et* Yang 很近似，但后足腿节无褐色前条纹，后足胫节基部褐色，M_3 不直接与盘室相连。

正模 ♂，云南金平丫口，2006-05-18，张俊华采。

关键词 双翅目，水虻科，星水虻属，新种，中国.

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